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A NEEDS-CAPABILITIES ASSESSMENT OF
THE NASHUA CORPORATION PLANNING PROCESS

by

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Signature of Author..
Department of Management, May 10, 1977

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ABSTRACT

This paper is one element of a structured group effort directed towards researching the planning methodologies of approximately thirty corporations of varied size, structure, and industry. In particular, this study examines the planning approach of the Nashua Corporation, Nashua, New Hampshire.

Three distinct stages of the study are carried out. First, it investigates the needs of the Nashua Corporation as dictated by its situational setting and its managerial style. Given these external and internal need characteristics, the second phase of the paper is directed towards an examination of the in-place planning process. The third step is to determine the degree to which the needs of the firm are matched to the capabilities of the planning system being used. Of critical importance in this assessment is the distinction between the internal, integrative function of the system and the external, adaptive capabilities of the planning process. The degree to which the Nashua Corporation's planning approach meets the needs of the firm is used as a measure of planning system effectiveness.

The analysis of needs and capabilities is evaluated in terms of apparent match and mismatch situations. Recommendations for further development of the planning system at the Nashua Corporation are set forth.

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Title: Assistant Professor of Management Science

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INTRODUCTION

OBJECTIVE

This paper is one element of a structured group effort directed towards researching the planning methodologies of approximately thirty corporations of varied size, structure, and industry. The effort as a whole attempts to test the planning framework developed by Peter Lorange in the Working Paper "Diagnosis and Design of Strategic Planning Systems - A Research Proposal". This paper in particular examines the planning approach of the Nashua Corporation, Nashua, New Hampshire. It attempts to assess the effectiveness of that organization's planning system, and, together with the other individual studies arising from the group effort, will be used in research directed towards the development of a workable format for the design and implementation of an appropriately structured planning system for any given corporation.

METHODOLOGY

Basically, this study involves three distinct stages. First, it investigates the needs of the Nashua Corporation as dictated by its situational setting and its managerial style. Given these external and internal need characteristics, the second phase of the paper is directed towards an examination of the in-place planning process. Both the mechanics of planning and the capabilities arising from the system are to be viewed. The third step is to determine the degree to which the needs of the given firm are matched to the planning system

being used. Of critical importance in this assessment is the distinction between the internal, integrative function of the system and the external, adaptive capabilities of the planning process. The degree to which the Nashua Corporation's planning approach meets the needs of the firm will be the measure of effectiveness of the planning system. For a detailed description of the research methodology, see the Working Paper - "An Analytical Scheme for Assessment of a Company's Planning Needs, Planning Capabilities and Planning Effectiveness" by Peter Lorange.

ACKNOWLEDGEMENTS

This paper would not be possible without the structural framework provided by Lorange/Vancil through their development of appropriate terminology and the 3x3 planning scheme. Further, discussions with Peter Lorange, Ben Ball, and fellow participants in this thesis project have greatly contributed to my knowledge in the area of strategic planning.

I am grateful to Mr. Larry Hornor, Vice President, Corporate Development at the Nashua Corporation whose influence led to the participation of Nashua in this project. Finally, I am deeply indebted to Mr. Donald Boyle, Director of Planning, for his time, patience, and cooperation in gathering and providing the data necessary for the completion of this paper.

HISTORY

THE CORPORATION

The Nashua Corporation is an international manufacturer and marketer of a wide range of products. The underlying corporate strategy is revealed in the relationship of virtually all of Nashua's businesses to the corporation's central skill in applying ultra-fine particles and chemical coatings to various surfaces for use in a variety of activities. The company began in the area of graphic and coated adhesive products, establishing a core business in areas such as industrial tapes and labeling products. Its movement into the office copy product area involved a transfer of Nashua's central coating and particle technology, as well as a more complete development of marketing skills and a distinct movement into the international market. More recent diversification into the areas of computer products and photofinishing has enlarged the scope of Nashua's activities, providing additional outlets for the skills developed in the core businesses.

Nashua's strategy has been to utilize its value added manufacturing capabilities and its aggressive, flexible marketing skills to enter into rapidly developing growth markets. Typically, this involves markets dominated by very large competitors such as Xerox, Eastman Kodak, 3M, and IBM. In each case, Nashua has relied upon its ability to identify feasible, accessible growth areas where it can successfully obtain a rewarding market niche. In some cases this has involved domination of a particular segment not pursued by one of the corporate

giants. In other instances, Nashua has assumed the number two or three position in a market growth area by being a price conscious successful imitator of an original product. Of increasing importance in Nashua's overall scheme has been the growth of its multinational operations. Again, this trend has capitalized on the company's distributional and marketing skills.

For much of its history, the Nashua Corporation has enjoyed uninterrupted growth and prosperity. From 1963 to 1973, the company's pretax margins averaged around 11%, sales grew at a compound rate of 18%, and earnings per share increased by 15%. From a 71 million dollar firm in 1966, Nashua grew to a 316 million dollar operation by 1974. Operating with a stable, internally developed senior management, it expanded to a medium sized multinational firm which by 1975 employed nearly 500 direct salespeople in ten wholly owned foreign subsidiaries and distribution networks in 90 other countries. More than 7000 employees were accounted for in all. Nashua's stock was stable with a market value in 1975 of more than $200 million on approximately 4.5 million shares outstanding. Nearly one-third of the New Hampshire firm's shares are owned by the founding Carter Family, while a great deal of the remainder is in institutional portfolios.

With the optimism and confidence born of more than a decade of record results, 1975 provided a rude shock to Nashua. Certainly the worldwide recession of that year provided a severe test in itself by its effect of reduced demand levels. Compounding the problem was a

1974 decision to stockpile inventory to capture a perceived advantage in the light of inflationary trends. Further, Nashua immediately prior to the 1975 economic conditions was in an expansion phase of product lines with heavy start-up costs involved. The latter two factors delivered a severe impact due to the company's short capital base for growth and the resulting need for short-term debt capital in the face of world-wide economic decline.

Reaction to Nashua's crisis were swift, both from an external and an internal point of view. The market value of common stock was reduced in the aggregate to $40 million. Total debt was extended at its peak to $138 million on an equity of approximately $84 million in what was clearly a severe crisis situation. Total sales for the year showed the first decline in corporate history; earnings per share plummeted. Internally, management recognized the adverse situation and activated survival measures. Cost reduction programs were begun, to include employee cut backs and some international offices closings. Managerial efforts were almost completely delegated to the short term tasks of regaining fiscal stability. Particular emphasis was placed upon reduction of debt levels.

Nashua's efforts to shore up its weakened operation can tentatively be labeled successful. It appears that 1976 will be a recovery year, and that future market opportunities provide recognizable growth potential. Further, the corporation's approach has been to pursue growth with a cautious optimism and a fuller awareness of balance sheet

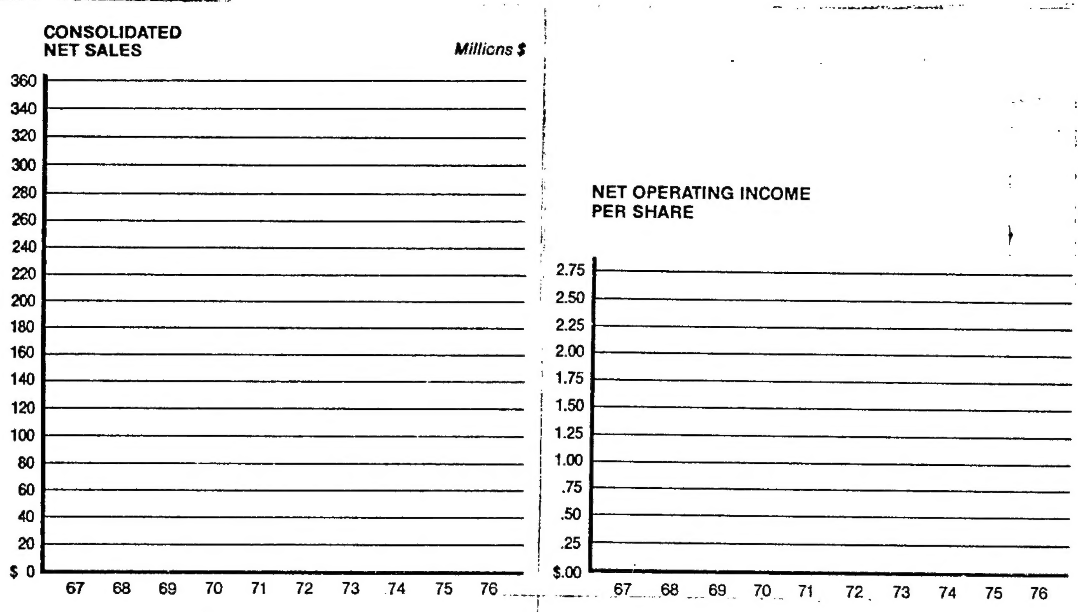
implications. A financial history of the Nashua Corporation is provided in Figures 1-3.

The organization of the Nashua Corporation is depicted in Figure 4. It is basically a product division type structure. The vice presidents at the corporate level perform functional tasks, while the Product Groups consist of related product divisions. The Graphic and Coated Adhesive Products Group and the Office Copy Products Group are multiple division groups, while the Computer Products and Photofinishing Groups are considered pure product divisions. Within each division are a varying number of "strategy centers" which are distinct entities. These strategy centers are distinquished by either geographical responsibility or product line; presently 38 strategy centers are identifiable and the organization depicted is relatively stable. In addition to the strategy centers assigned to each division, there is a varying degree of divisional functional support in the areas of controller, R&D, marketing, etc.

THE PLANNING SYSTEM

Throughout the uninhibited period of growth experienced by Nashua prior to 1975, the planning process was formalized only in the sense of budget preparation and financial forecasts. Validation and explanation of these figures generated were generally non-standard and not expressed in written form. Two budgetary meetings were held at the corporate level, one in June followed by a December meeting. The June meeting required division managers to submit financial results and long range projections;

Figure 1



Source: Nashua Corporation 1976 Annual Report

Figure 2

Revenue and Cost Analysis
(Percentages)

	1970	1971	1972	1973	1974	1975
Gross margins	33.2%	34.2%	34.3%	35.9%	39.1%	33.6%
As a % of revenues						
Research and development expenses	2.7	2.7	2.1	2.5	2.2	1.9
Selling, general and administrative expenses	18.2	20.0	21.4	23.1	26.8	27.1
Net interest expense	1.2	1.3	0.8	1.2	2.9	3.4
Pretax margin	11.1	10.2	10.0	9.1	7.2	1.2

Source: Blyth Eastman Dillon & Co., Inc.
Purchase Recommendation - John M. LeFrere

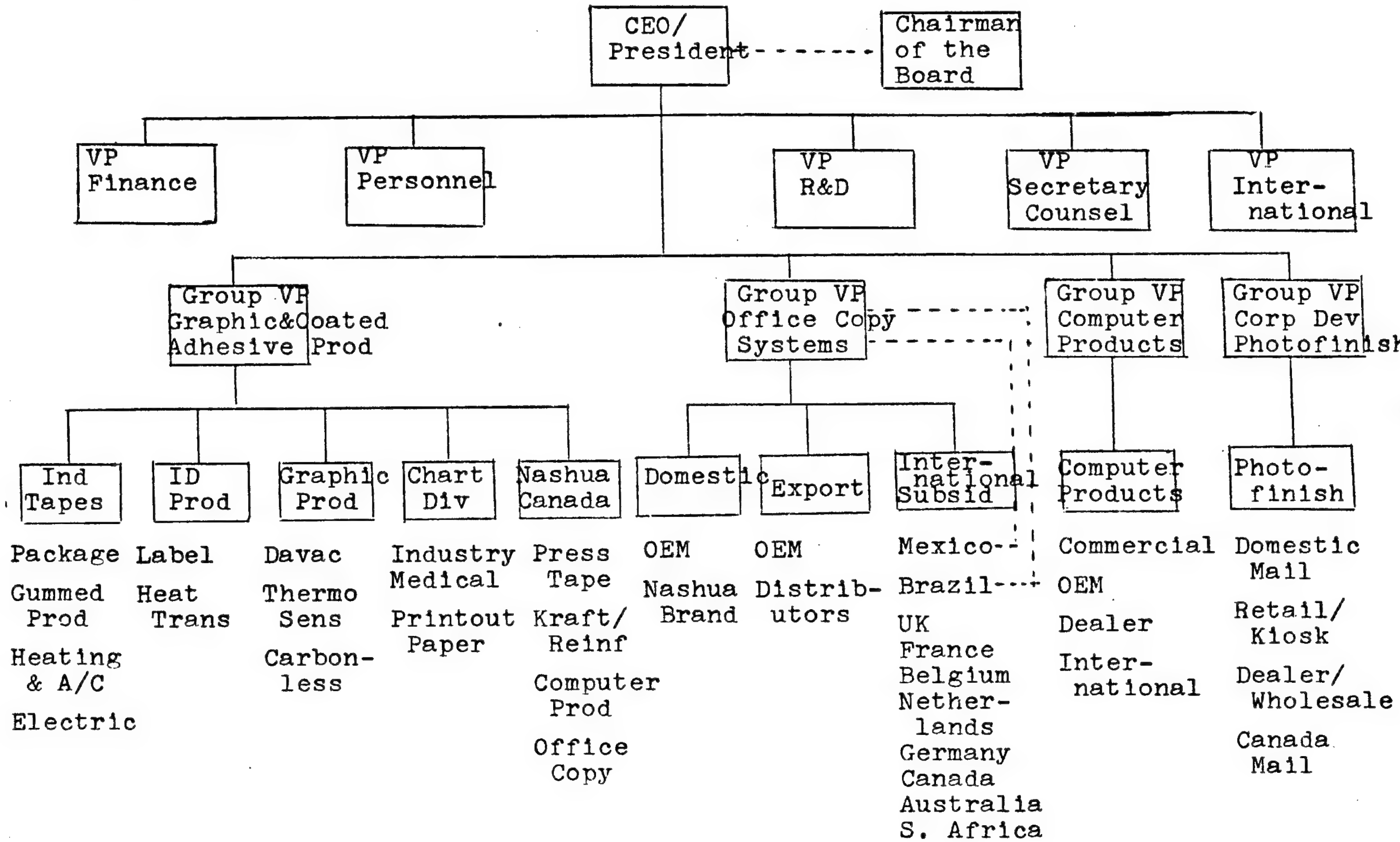
Figure 3

Balance Sheet and Other Data

	1970	1971	1972	1973	1974	1975
Current ratio (%)	2.1	2.0	2.0	2.0	1.4	1.6
Long-term debt/total capital	33%	30%	27%	35%	40%	40%
Working Capital as % of Sales	18%	18%	18%	20%	15%	15%
Revenue per employee (in thous.)	$33.1	$35.2	$36.4	$36.6	$44.0	$48.4
Inventories/sales	15.5%	16.0%	14.5%	16.9%	23.7%	15.9%
Accounts receivable turnover (days)	56	58	64	73	85	75
Book value per share	$10.18	$11.16	$12.55	$15.4	$18.2	$18.2

Source: Blyth Eastman Dillon & Co., Inc.
Purchase Recommendation - John M. LeFrere

Figure 4


CEO/ President
Chairman of the Board
VP Finance
VP Personnel
VP R&D
VP Secretary Counsel
VP International
Group VP Graphic&Coated Adhesive Prod
Group VP Office Copy Systems
Group VP Computer Products
Group VP Corp Dev Photofinish
Ind Tapes
Package
Gummed Prod
Heating & A/C
Electric
ID Prod
Label
Heat Trans
Graphic Prod
Davac
Thermo Sens
Carbonless
Chart Div
Industry Medical
Printout Paper
Nashua Canada
Press Tape
Kraft/Reinf
Computer Prod
Office Copy
Domestic
OEM
Nashua Brand
Export
OEM
Distributors
International Subsid
Mexico
Brazil
UK
France
Belgium
Netherlands
Germany
Canada
Australia
S. Africa
Computer Products
Commercial
OEM
Dealer
International
Photofinish
Domestic Mail
Retail/Kiosk
Dealer/Wholesale
Canada Mail

the December gathering determined the budget for the following year. Corporate executives felt well enough involved with the operations of each division to both be aware of the division's internal operations as well as the operating climates faced in an external sense. Corporate strategy evolved from these semi-annual meetings and was manifested in annual operating budgets and particularly in allocations of funds for capital and project expenditures.

The 1975 crisis at Nashua prompted a change in the planning methodology for two fairly specific reasons. First, the corporate group urgently needed a more realistic, tightly controlled system to facilitate the overall corrective action in a fiscal constraint policy. A second, though in 1975 a less desperate need, was to develop a sense of corporate unity in a more strategic sense so as to determine a long range course of action in regrouping and analyzing the task ahead.

In 1975, Nashua adopted the Arthur D. Little Strategy Center Profile approach for managing diverse corporations. The office of Corporate Planner was created and made responsible for the implementation of the ADL approach. Consultants from the Arthur D. Little Corporation played no role in the implementation phase beyond the initial presentation of the system. The first planning cycle utilizing the ADL format was done in 1975 for 1976. Subsequent planning cycles for 1977 and 1978 have brought modifications and expansion of the initial effort. These changes will be detailed in the discussion of the planning system capabilities. Throughout the ADL planning approach era, corporate responsibility for

planning has remained with the Vice President, Corporate Development.

NEEDS

SITUATIONAL SETTING

General

The Nashua Corporation considers itself to be involved in four principal business activities: (1) Graphic and Coated Adhesive Products; (2) Office Copy Products; (3) Computer Products; and (4) Photofinishing. Although each business is largely based upon the common technology of coating applications, they are generally operating in different sales and manufacturing environments with separate competitors, risks, and strategy considerations. Each product group will be examined individually in some detail, and the appropriate elements drawn from each to form the corporate setting.

Graphic and Coated Adhesive Products Group

The industrial tapes sector constitutes the largest division within Graphic and Coated Adhesive Products with 1976 sales of $42.4 million or about 30% of the Group's total sales (see Figure 5 for a breakdown of sales by division and strategy center with the Group). Manufacturing facilities are located in Nashua, Chicago, and Watervliet, New York. In maintaining a broad product line, Nashua is able to service segments within the construction, automotive, electrical, and packaging markets. Expansion has been through internal development of new products and acquisition of existing operations. The tape division was severely impacted by the 1975 financial crisis with an 18% reduction in sales demand from 1974 levels. Each type of tape faces a different competitive

basis; the more specialized types entering on a product advantage competition, while the general purpose tapes are relatively price sensitive. The total world wide market for tapes exceeds one billion dollars, with competition from such large sources as Avery and 3M.

The Identification Products Division contributed $28.3 million to the Group's sales for 1976. It includes one of Nashua's more successful growth products, a heat transfer paper product which doubled in production volume during 1975. The product transfers color to fabrics to produce design patterns for a variety of uses. The market is perceived as rapidly growing but volatile.

Within the Graphic Products Division are two specialized label papers, thermo-sensitive and Davac. These products were stable in 1975 and were strong profit contributors during 1976. Nashua is the leading factor in both these market segments. The products are versatile; the thermo-sensitive labels adhere to a wide variety of surfaces. The third product within the division is carbonless paper, used in business forms of all types as a convenience product. It is sold through distributors in sheet form and in rolls to large users. Sales were reduced drastically by the 1975 recession. While Nashua holds a portion of the $160 million dollar domestic market, its entry has been impeded by the dominant competition of NCR and Mead. Carbonless incurred a significant pretax income loss in 1975. Long term growth is most likely in the international market where Nashua may possess distribution advantages. Total sales of the Graphic Products Division in

1976 were $21.2 million.

The Chart Division experienced revenues of $21.2 million in 1976. Nashua is a leading supplier in the worldwide market for chart papers used for medical devices, industrial laboratory equipment and in facsimile communication devices. This is a growth division with a 15% sales increase from 1975 to 1976. The division intends to utilize product differentiation to increase both sales level and share in the rapidly expanding total market.

Nashua Canada is an independently operated subsidiary which has both a manufacturing and marketing function. It is not pure in a product sense, but instead contains elements from several product groups. Its inclusion in the Graphic and Coated Adhesive Product Group is a matter of historical development and product emphasis. Its competitive atmosphere is basically the same as the parent Nashua firm.

The Graphic and Coated Adhesive Product Group contributed as a whole approximately $141 million or 47% to corporate revenues. It is the core Group from which the Nashua base technology developed. The Group is characterized by a mix of growth and mature products with basically medium risk. The carbonless element represents the single high risk proposition, while the Chart Division and the Heat Transfer strategy center are high growth, leading edge entities.

Figure 5

GRAPHIC & COATED ADHESIVE PRODUCTS

INDUSTRIAL TAPES DIVISION	Net Sales 1976	Life Cycle	Risk
1. Packaging	12.0	mature	medium
2. Gummed Products	8.8	declining	medium
3. Heating & Air Cond.	10.8	mature	medium
4. Electrical	10.8	mature	medium
	42.4		
ID PRODUCTS DIVISION			
1. Label	22.6	mature	medium
2. Heat Transfer	5.7	growth	medium
	28.3		
GRAPHIC PRODUCTS DIVISION			
1. Davac	6.0	mature	medium
2. Thermo-Sensitive	8.0	mature	medium
3. Carbonless	7.2	growth	high
	21.2		
CHART DIVISION			
1. Industrial	10.5	growth	medium
2. Medical	9.6	growth	medium
3. Print Out Paper	1.1	growth	medium
	21.2		

Figure 5 (Cont.)

NASHUA CANADA	Net Sales 1976	Life Cycle	Risk
1. Pressure Sensitive	1.7	growth	medium
2. Kraft/Reinforced	1.3	decline/growth	low
3. Computer Products	.7	growth	medium
4. E-Tax	4.3	mature	medium
5. Other	20.3		
	28.3		
GROUP TOTALS	141.4	7.5G, 7M, 1.5D	1L, 14M, 1H

Note: Sales Figures have been altered for reasons of confidentiality.

Office Copy Products Group

Nearly 49% of Nashua's total sales in 1976 were generated by the Office Copy Products Group. The domestic and foreign operations are clearly distinquishable both in organization and function. The Domestic Office Product Division is a manufacturer and supplier of office copy supplies. In one mode, Nashua sells supplies directly to copy machine manufacturers to be sold under the manufacturer's private label. The Nashua Brand business sells paper, toner, developer, and other supplies through a dealer network to owners of machines already in the field. In addition to selling products for Savin Business Machines, with whom Nashua has a working relationship, supplies are sold for use in IBM and Xerox copy machines.

On an international basis, Nashua supplies office copy systems to include the machine itself and the necessary supplies. The Export Division essentially performs the same function as the domestic division, except on an international level. The major outlets again are defined in terms of equipment manufacturers and end users. It is the sale of copy machines by international subsidiaries and distributors, however, which accounts for the dominant share of group sales. Nashua, in strictly a marketing/distribution function, sells the Ricoh, Inc. of Japan line of copy machines. The sales of this division, together with the obvious follow-up business of supplies to machines sold, have supplied the sales growth to the group as a whole. In late November of 1975, the 1220 plain paper copier was introduced with tremendous success. Utilizing a new

technology termed liquid toner transfer, the product's present and future sales make it Nashua's single most important new product.

Over the course of the past five years, the Office Copy Products Group has become the largest group within Nashua's Organization. Sales in 1976 of more than $184 million were heavily weighted to the international divisions; a large percentage of Nashua's total foreign business is conducted in office copy products. It is clearly a growth group, with new products replacing old in some instances. Overall risk is viewed as medium: (See Figure 6 for sales, life cycle, and risk information.)

OFFICE COPY PRODUCTS

Figure 6

DOMESTIC OFFICE PRODUCTS	Net Sales	Life Cycle	Risk
1. OEM	31.6	growth/decline	medium
2. Nashua Brand	42.2	growth	low
	73.8		
EXPORT DIVISION			
1. OEM	7.8	growth/decline	medium
2. Distributors	38.4	growth	medium
	46.2		
SUBSIDIARIES			
1. -10. inclusive	64.7	growth	medium
GROUP TOTAL	184.7	13G, OM, 1D	1L, 13M, OH

Note: Sales figures have been altered for reasons of confidentiality.

Computer Products Group

The Nashua Computer Products Group supplies IBM System 370 and other systems with computer disc packs and disc cartridges to end users, private brand distributors, and original equipment manufacturers. More recent entries have been into floppy disc products and the mini-computer market. From the 1968 date of entrance into the computer supplies field until 1972, pretax income suffered from start-up and research expenses. From 1972 through 1974, new product acceptance and increased manufacturing experience contributed to increased sales and profit. The 1975 recession, a plant relocation and consolidation, and manufacturing problems in developing IBM-type data modules combined to impose declining sales and negative profits for 1975 and 1976. A corporate decision during this period was made to reorient the product line towards less direct competition with IBM-type products and a broadening of product lines into the small systems area. Total sales for 1976 were $20.6 million with an operating loss incurred. The Computer Products group represents approximately 5% of Nashua's revenue for 1976. Products are generally in the growth stage with medium risk. (See Figure 7 for sales, life cycle, and risk information.)

COMPUTER PRODUCTS

Figure 7

		Net Sales	Life Cycle	Risk
1.	Commercial	3.1	growth/mature	medium
2.	OEM	3.1	growth	medium
3.	Dealer	4.1	growth/decline	medium
4.	International	10.3	growth/mature	medium
GROUP TOTAL		20.6	2.5G, 1M, .5D	0L, 4M, 0H

Note: Sales figures have been altered for reasons of confidentiality.

Photofinishing Group

The Photofinishing Group was responsible for $31.0 million in sales in 1976 and represented nearly 8% of total Nashua revenues. Nashua in 1971 and 1972 entered this product via acquisition of existing firms. The firm has moved aggressively to modernize, expand, and create a long-term interest in the area. In the domestic mail order business, Nashua seeks to obtain an ever-increasing market share in a mature/declining market segment. This is a price sensitive, competitive market in which Nashua is the market leader. The domestic mail order business dominates the Photofinishing Group, making up nearly 50% of sales. The growth segment in this group, however, is in the retail outlet/Kiosk area where Nashua is seeking a niche behind the Fotomat operation which dominates the market. Approximately 40 new Kiosk outlets opened in 1976 as that market segment continues to expand. Both the mail order and Kiosk methods of processing utilize the same Nashua owned facilities which are regionally distributed. International sales from foreign subsidiaries are expected to provide increased growth potential. Risk for the group is expected to remain in the low to medium area. One factor increasing risk in the processing area is the continued infringement of self-developing film and cameras by Polaroid and Kodak. The Photofinishing Group is divided among growth and mature segments. (See Figure 8 for sales, life cycle, and risk information.)

PHOTOFINISHING

Figure 8

	Net Sales	Life Cycle	Risk
1. Domestic Mail Order	15.5	mature	low
2. Retail/Kiosk	6.2	growth	medium
3. Dealer/Wholesale	3.1	mature	medium
4. Canada Mail Order	6.2	growth	medium
GROUP TOTAL	31.0	2G, 2M, OD	1L, 3M, OH

Note: Sales figures have been altered for reasons of confidentiality.

Summary

The preceding group descriptions lead to an overall corporate situational setting. In attempting to broaden its product base and hence create areas for potential growth, it has over the period of a decade altered its complexion from a mature, stable, low risk business to become a firm with sales in 1976 of more than $375 million derived from a diverse group of products. (Figure 9 shows corporate sales, life cycles, and risk.) Nashua is a mix of growth and mature businesses with a medium risk profile. Risk has increased due to new product lines and an increased emphasis on and investment in foreign sales whose risk is variable. Sales for 1976 internationally accounted for 51% of total revenue.

The Office Copy Products Group has provided much of the corporate growth in becoming the dominant group within the firm. The Graphic and Coated Adhesive Products Group has remained an area of steady growth and a highly significant factor in providing income for expansion. Photofinishing has been a consistent growth area and provided essential income levels during the 1975 fiscal crisis. Computer Products is perhaps the most unstable group in terms of direction and market opportunities. (See Figure 10 for summary of sales and income trends by Groups.)

NASHUA CORP. TOTALS

Figure 9

	Net Sales	Life Cycle	Risk
	377.7	25 Growth	4 Low
		10 Mature	33 Medium
		3 Decline	1 High

Note: Sales figures have been altered for reasons of confidentiality.

Figure 10

Contribution to Net Sales and Pretax Income of the Four Major Product Groups (dollars in millions)

	Office Copy Products		*Graphic and Coated Adhesive Products **		*Photofinishing*		*Computer Products*		*TOTAL*	
	Sales	*Income*	*Sales*	*Income*	*Sales*	*Income*	*Sales*	*Income*	*Sales*	*Income*
1972	$ 72.4	$ 8.8	$ 74.4	$ 5.3	$17.1	$2.3	$ 7.7	$ .6	$171.6	$17.0
1973	$ 96.5	$ 9.6	$ 91.6	$ 5.2	$22.1	$3.1	$14.1	$ 2.3	$224.3	$20.2
1974	$139.5	$ 6.6	$128.6	$10.0	$26.5	$2.5	$21.3	$ 3.7	$315.9	$22.8
1975	$155.1	$ (1.8)	$103.4	$ 2.1	$28.5	$4.2	$17.9	$ (.8)	$304.9	$ 3.7
1976	$187.6	$ 6.3	$115.9	$ 7.0	$32.1	$2.8	$20.6	$ (1.9)	$356.2	$14.2

*Formerly Other Coated and Printed Products

Source: Nashua Corporation 1976 Annual Report

MANAGEMENT STYLE

The Nashua Corporation decision-making process is embodied in its corporate officers. This group includes the Chairman of the Board, the President/CEO, the Vice Presidents of Finance, Personnel, Research and Development, Secretary and Counsel, and International and the four Group Vice Presidents. (See Figure 4, Organizational Chart) Also among the officers are the Treasurer, the Domesticand International Comptrollers, the Assistant Secretary, and the Assistant Counsel.

The company itself is a New England based firm which retains within its corporate structure much of the experience bred while the company was developing beyond its regional and national boundaries. Most of the corporate group have grown with Nashua and as individuals have roots within the firm and within the Nashua, New Hampshire area. Promotion to the corporate level has been from within; junior level managerial talent has been been brought in from local colleges and universities. Senior managers have a "hands-on" feel for one or more businesses within the company.

The Chairman of the Board is a member of the founding Carter family. Until August, 1972, he also served as CEO. He carries considerable influence in an advisory sense, and is especially active in the formation of long-term objectives and corporate development.

The President of the firm gained the additional responsibility of CEO in August, 1972. His 51 years of age presumably will allow Nashua stable guidance for at least the next 15 years. While he relies upon

his corporate executives for advice, major decisions are frequently his. The President is aided in this decision-making by his prior line and staff positions within the firm. While the fiscal crisis of 1975 has increased the necessity for short-term performance in balance sheet type indicators, he has in the past exhibited an entrepreneurial spirit in undertaking calculated risk propositions with potential good payoffs. Overall, the President/CEO of Nashua is unquestionably in control and is able to exert strong informal and formal influence when necessary.

NEED ASSESSMENT

General

This section attempts to measure the degree of adaptation and integrative needs as exhibited by the situational setting of the Nashua Corporation and its managerial style. The format and substance of this assessment follows that given by Peter Lorange in the Working Paper "An Analytical Scheme for Assessment of a Company's Planning Needs, Planning Capabilities and Planning Effectiveness", Part One, Needs for Adaptation and Integration: Interpretations

Diversity, Strategy, and Structure

The Nashua Corporation is clearly a Product Division organization, with 38 defined Strategic Business Units. Possible increases in SBU number may be due to international expansion in the areas of Office Copy Products and Photofinishing, while decreases in number could come about through consolidation of product SBU's into more general market SBU's. The diversity and number of SBU's, together with the external and internal volatility apparent, points towards high integrative and adaptive needs. Flow chart analysis (SR=.07, RR=1.0, VR=0) and definitional considerations lead to a Related-Constrained relationship among the Nashua businesses. This interdependence reinforces the need for integrative management needs, in order to deal with the existing central skill. Adaptive and integrative requirements are evident in that on an international level, the corporation operates in more than 100 countries. The company is diverse enough to have varied manufacturing processes.

Nashua is a mixture of growth and mature SBU's, with an overall risk level in the medium range. This type of SBU portfolio requires adaptive thinking to rejuvenate or replace mature businness, and integrative management to take full advantage of those SBU's in the growth phase.

The general pattern of needs for adaptation and integration stemming from patterns of diversity, strategy, and structure are as shown in Figure 11. Adaption needs are in the medium-high range, while clearly high integration needs are dictated.

Figure 11

Factor class (from pp. 1-4)	Adaptation Need			Integration Need		
	H	M	L	H	M	L
# 1	X			X		
# 2	X					
# 3				X		
# 4-6		X		X		
# 7	X			X		
# 8						
# 9	X			X		
#10		X			X	
#11	X	X		X		
General pattern	5	3	0	6	1	0

Operating Results: Balance Sheet Information

Due to the 1975 fiscal crisis, this section is difficult to interpret. In terms of financial ratios, sales, and profits, the corporation may be viewed as a long-term, successful growth company with clearly favorable trends interrupted only by a single crisis year. On a short-term basis, the year 1975 points to an obviously unfavorable situation with severe after-effects. Because this study focused upon the present needs and capabilities of the firm, a short-term view is taken. It can be argued that the cautious optimism of the firm and the 1976 recovery year dictate a middle ground in these areas. Furthermore, it should be noted that the current recovery and the crisis which preceded it have probably introduced abnormalities into Profit and Loss Statement and Funds Flow Statement Figures.

The most critical implication arising from operating results is the integrative need dictated by the unfavorable conditions of 1975. Management emphasis seeks to consolidate the short term balance sheet position of the firm through integrative effort. This need is reinforced by the constraint of the present level of the debt-equity ratio.

The general analysis of Financial Results in terms of adaptation and integration needs is as depicted in Figure 12. Adaptation needs from operating results and balance sheet information appear on the whole to be not concentrated as to degree nor intense in number. Integration needs conversely are definitely placed in the high category without significant spread-to medium and low areas.

Figure 12

General Analysis of Financial Results

Factor Class (from pp. 4-5)		Adaptation Need			Integration Need		
		H	M	L	H	M	L
#1:	Item 1				X		
	Item 2				X		
	Item 3				X		
#2:	Item 1				X		
	Item 2				X		
	Item 3		X			X	
	Item 4		X			X	
	Item 5			X			
	Item 6	X					
#3:	Item 1						
	Item 2						
	Item 3						
	Item 4						
	Item 5						
	Item 6						
#4					X		
General Pattern		1	2	1	6	2	0

SBU Competitive Position

Four SBU's were examined in detail; two each from the Office Copy Products Group and the Photofinishing Group. In the Office Copy Group, the domestic Nashua Brand SBU and the Brazilian international subsidiary were considered. The Photofinishing Group representatives were the domestic mail order and retail/kiosk SBU's.

The results of the general analysis of competitive position and risk are as shown in Figure 13. The pattern of results is not overly conclusive. Rather than point towards an obvious imbalance, the results are fairly well distributed, indicating a probable medium adaptation, medium integration need profile. In terms of weight of response, adaptive needs were identified to a greater extent than were integrative needs.

The reliability of this portion of the needs analysis is questionable. In view of the diverse nature of the corporate businesses, it must be realized that a wide variety of SBU competitive stances are reportable. In selecting, by whatever criteria, only four of a possible 38 SBU's, this section's credibility is dampened. It clearly would be possible to select four SBU's whose general pattern of response would reflect adaptive needs. Similarly, four elements could be chosen which would be biased towards integrative needs. The scope of this research does not allow a detailed analysis of all 38 SBU's.

One implication of this portion of the needs assessment is, however, clearly relevant, and appears to emphasize adaptive requirements. The

Figure 13

General Analysis:
Competitive Position and Risk

Factor Class (from pp. 6-9)		Adaptation Need			Integration Need		
		H	M	L	H	M	L
S. B. U. Position:	Item 1	XXX		X	XX		XX
	2	XX	XX				
	3				XXX	X	
	4				X	X	XX
Funds Flow Position							
Integration Measures:	Item 1			XXXX	XX	XX	
	2				XX	XX	
	3				XXX	X	
	4				X	X	
	5					X	X
	6				X	XX	X
Adaptation Measures:	Item 1	X	XX	X			
	2	X	XX	X			
	3	X	X	XX			
	4	X	XX	X			
	5		X	XXX			
	6	XX	XX				
Product Strategy Position:	Item 1		XX			XX	
	2		XXX			XXX	
	3	XX	XX				XXXX
	4	XXX	X		X		XXX
	5		XXX		XX	X	
	6			X			X
	7						
	8						
	9						
Managerial Positioning:	Item 1	XXX	X				
	2		XX	XX			
	3		XX	XX			
	4		XXXX				
Risk:	Item 1		XXX	XXX		XXXXX	X
	.						
	.						
	x						
General Pattern		19	35	21	18	22	15

Brazilian international subsidiary of the Office Copy Products Group tends, due to the high growth, product marketing nature of the business, to have relatively high adaptive needs when viewed independently. This SBU is but one of ten international subsidiaries with similar adaptive needs whose aggregate sales dominate the Group and are a major portion of the Nashua Corporation's revenues. Because of this situation, as well as the probable future growth projected in this area, it may well be that a summary analysis of SBU competitive position and risk be weighted in favor of this emerging product group. Such an emphasis would lead to fairly high adaptive needs.

Finally, the context of Nashua's major strategic thread, that is identification and entrance into high growth markets, would indicate high adaptive and high integrative needs. The adaptive requirements stem from the need to effectively choose viable markets and to then correctly assess the proper strategic positioning of products within those markets. The integrative needs are due to the demands of being cost-effective and price competitive in the light of the size and resources of the competitors with these high growth areas.

Summary

An overall assessment of needs must account for management style and situational factors. This task is made difficult by the diversity of both managerial type and business to be found within the organization of Nashua. Nevertheless, certain indicators are available to carry out a meaningful analysis.

The assessment of diversity, strategy, and structure led to a fairly predictable and reasonable classification of medium-high adaptation needs and high integration needs. The diverse, multinational organizational structure requires a constant monitoring of cultural and competitive environments over a wide range of activities. That same diversity, in order to be controllable, requires integrative ability, particularly in light of the common technology base of virtually all of Nashua's businesses.

Obviously, but realistically, the operative results section of the assessment is biased in terms of the short term focus of a corporation recovering from the worst financial crisis in its history. If Nashua's recovery of 1976 is an indication of future growth trends, a reassessment in several years' time will yield a general pattern of strong adaption needs. This emphasis will be heightened by easing of debt constraint and funds flow considerations. While recognizing these implications, the present analysis is in light of the short term requirement to manage financial resources in a post-crisis situation, and views the recent past with emphasis. High integration needs are the result of the over-

riding concern of corporate management to stabilize internal fiscal control in an effort to regain investor confidence.

The analysis of competitive position was, as indicated in that section, not an ideal indicator of need, and the considerations outlined there need to be taken into account. Incorporation of the perceived effect of the international growth opportunities yields a medium-high adaptive need and a medium integration need. Perhaps the most important visible effect stemming from this section is the balance or symmetry shown for both adaptive and integrative needs. Clearly both are significant, even in the small sample size of SBU's studied.

Overall, in terms of situational setting, Nashua appears to have medium-high adaptive needs and high integrative needs. This summary assessment is based upon the combined results of the previous three sections.

Senior management at Nashua are control oriented in that they attempt to maintain a working knowledge of corporate businesses. This is due in a large part to the promotion from within policy which has created an executive level of experienced, loyal managers. That attitude has been reinforced by the desire to consolidate Nashua's position following the 1975 crisis. These perceptions on the part of management lead to high integration needs. The aggressive marketing efforts found particularly in the international office copy products and in photofinishing have been constrained to some degree by the 1975 corporate results and

subsequent need to utilize cash flow on a maintenance rather than growth basis. This attitude will remain a function of the corporate growth outlook; as optimism is rebuilt, management perception of adaptive needs will grow. The present situation dictates medium adaptive needs as a consequence of management style.

CAPABILITIES

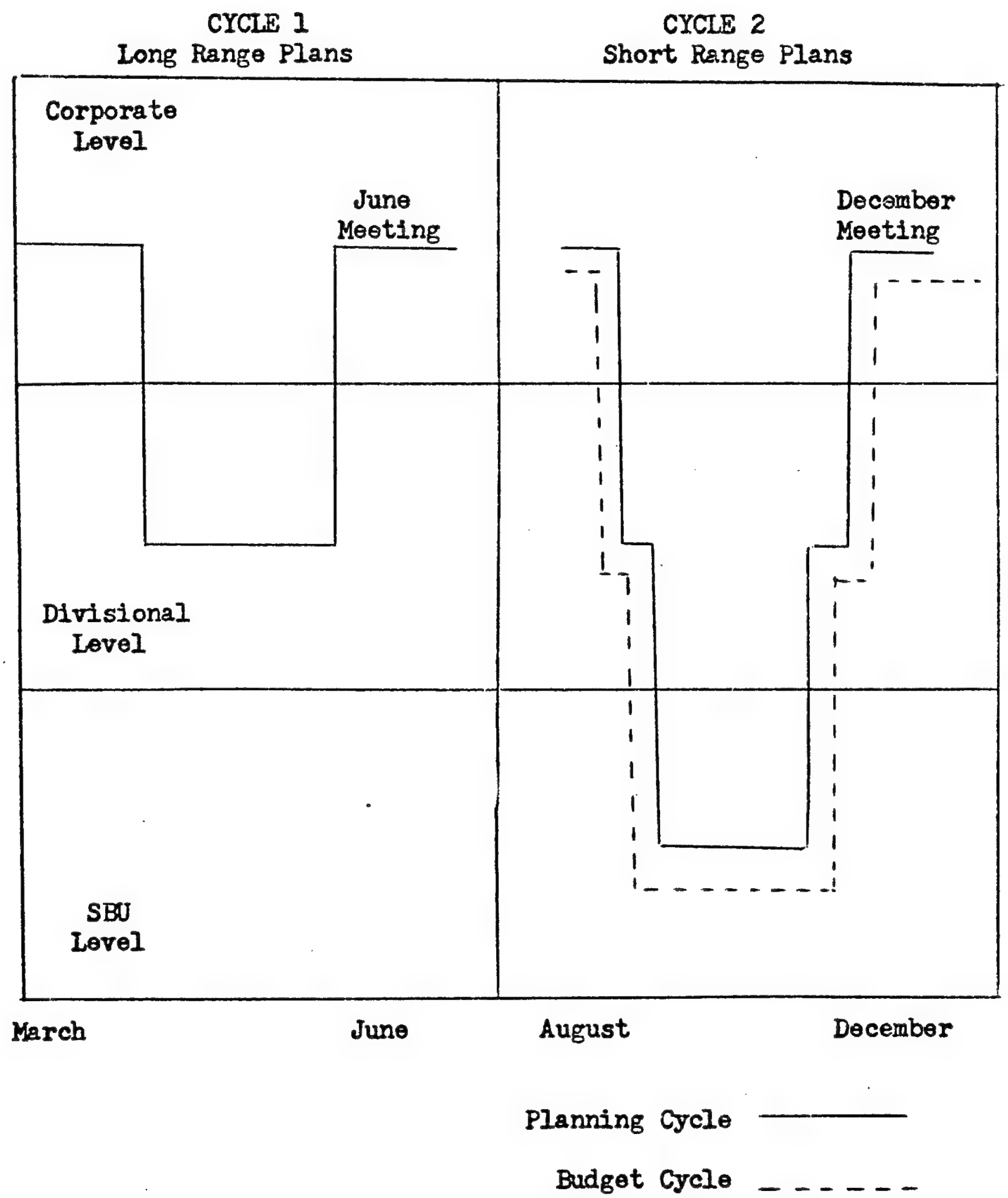
THE PLANNING PROCESS-DESCRIPTIVE SUMMARY

As indicated in the section in this paper on the historical development of the planning system, the current planning process at Nashua is really in the start-up phase. Since adopting the ADL approach in 1975, planning has undergone structural and process changes which are continuing at present as the company begins the 1977 planning cycle in preparation for 1978 operations. Thus, this descriptive summary, while basically a photograph in time of the 1977 planning cycle, will make reference to the limited history of the ADL approach at Nashua as well as probable future steps in modifying and/or expanding the present methodology.

The Nashua planning cycle begins in March and evolves along a continuous basis, culminating in December with the completed budget for the following year. The process is structured about two major meetings. A June meeting provides a long-range financial view from the divisional level to the corporate level, while the December meeting is a corporate examination of the SBU's detailed, short range plan which has been approved through division. A semi-independent budgetary cycle runs from August through December. Figure 14 provides a schemetic representation of the current stage of planning

Preparation for the June meeting is begun in March. The Corporate Planner reviews due dates, distributes forms and instructions, and

Figure 14


CYCLE 1
Long Range Plans
CYCLE 2
Short Range Plans
Corporate Level
June Meeting
December Meeting
Divisional Level
SBU Level
March
June
August
December
Planning Cycle
Budget Cycle

schedules preliminary reviews and presentations. Also during this time frame, corporate goals will be presented to divisional managers. The 1977 planning year is the first time that these goals will be formally incorporated into the process, although the idea was exposed and tested on an informal basis during the 1976 June meeting. Goals will be in the form of financial ratios and qualitative requirements. Selected divisions will be advised of their suggested assessed requirements given the corporate outlook. Divisionally managers meet formally and informally with SBU managers and divisional controllers to gather necessary information. The corporate planner's role is as a "bounce-off" medium trying to gauge how the corporate level management will react to proposed forecasts and objectives. He is also responsible for the format and structure of final submitted documents.

The content of the divisional long range plans is basically of two types. First, a financial plan/forecast of Profit and Loss Statement figures and Balance Sheet figures to include the previous year, an updated by quarter statement of the current year, and a forecast of the next three years. Market information concerning the SBU's within each division is also solicited on a previous year, current year, and three following years basis. The information is presented in a summary, aggregate form and is concerned primarily with the competitive position and industry developments for each SBU. The second type of report included in the divisional plan is a qualitative analysis of divisional strategy. The 1977 planning period will incorporate for the first time

a structured format for this commentary. The structure is intended to both provide a standardized format for ease in corporate digestion of all divisional reports, and to direct divisional managers towards meaningful, concise commentary. The structured divisional strategy summary includes defining the division's charter, outlining key objectives in quantifiable terms, and developing a strategy plan in terms of marketing, manufacturing, and new products.

The end result of the March-June portion of the planning cycle is the June planning meeting. It is attended by the corporate officers; the divisional managers are represented by the Group Vice-Presidents to whom they are responsible. The corporate planner attends the three day session in an advisory capacity. The meeting seeks to provide corporate heads a sense of direction without a large degree of detail, and provides thought material in preparation for the budget process and the December planning meeting. Finalized results of the June session are forwarded to the Board of Directors.

The December planning meeting is preceded by approximately five months preparation on the part of SBU managers. In August, the corporate planning office begins sending to the SBU managers, through the division managers, details as to the timing, format, and objects of the short range planning cycle. The purpose of this effort is to elicit a detailed examination of each SBU as it exists in the last quarter of the planning year and as it projects itself over the next year. The SBU report is prepared at the SBU level following formal/informal

negotiations with the divisional manager and staff. The corporate planner interacts at both the SBU and divisional level. His role is again that of a sounding board. He attempts to provide a realistic appraisal of the SBU outlook based upon the peculiarities of that SBU and the corporate viewpoint. Unwanted alterations are not forced upon SBU personnel, but the corporate planner may seek to prevent SBU/Divisional embarrassment at the corporate review level due to lack of preparation, unrealistic thinking, unsupported projection, or unwarranted assumptions. He also provides format and structure guidance; SBU managers rely to varying degrees upon functional resources/managers available to them in developing their strategy profiles.

The format of the SBU strategy profile is adopted from the ADL Strategy Center Profile approach. The SBU is examined on both a qualitative and quantative level. The former demands considerations of situational analysis, market trends, strategy development, while the latter generates financial data from the current year as well as a forecast for the upcoming year. The strategy center profiles for all SBU's are consolidated by division, and, together with summarized, aggregate material, are compiled into a document in book form.

The budget cycle, which runs concurrently with the SBU/short range planning cycle, is initiated during the month of August by the corporate controller's office. Instructions and requirements are passed to the divisional level. Divisional managers, SBU managers,

and functional managers within the division cooperate to generate the required data. Due dates at the corporate level are in the November time horizon. SBU managers utilize the figures generated in the budget process to complete their strategy center profiles required in the planning process, while the corporate controller compiles the divisional and group figures to obtain a corporate budget. He provides a measure of his confidence in divisional projections through the use of stated "adjustments". A completed, tentative corporate budget is available to the directors at the December planning meeting.

Also included in the planning process are quarterly operation reviews at which individual divisional managers meet with the corporate staff in an effort to update the staff's knowledge of the divisional situation. Deviations from figures projected in the past are discussed and accounted for. The reviews are intended to serve as a means of keeping the divisions "on-track" to their stated financial objections.

The December planning session, attended by virtually the same group as took part in the June meeting, utilized the results of the short range planning cycle, the budgetary cycle, and previous operations reviews to allocate funds by division, thereby providing the necessary means to carry out agreed upon strategy. The decisions to fund or not to fund projects are made on the basis primarily of supportive evidence provided by SBU's through their divisions. There are no explicit corporate required rates of return. The decision process also includes elements of political type maneuvering and instinct following. Generally,

a fairly consistent set of priorities and level of risk attitudes has been achieved by the corporate group prior to the December meeting. The sessions result in a series of adjustments to the capital expenditures tentatively approved by the controller's office in the budgetary cycle. With the figures arrived at through the December meeting, the controller compiles a finalized budget, thus completing the planning cycle.

CAPABILITY ASSESSMENT

General

Based upon the planning process in place at the Nashua Corporation, this section attempts to measure the adaptative and integrative capabilities present in the system. Both objective and subjective analysis is required in evaluating the structure and process utilized by the firm in planning. Much of the substance of this assessment follows that given by Peter Lorange in the Working Paper "An Analytical Scheme for Assessment of a Company's Planning Needs, Planning Capabilities and Planning Effectiveness", Part Two: The Planning System's Capabilities.

Structure

The Nashua planning system breaks down into two distinct cycles. Cycle 1 is conceptually similar to the Objectives Cycle of the Lorange/Vancil 3x3 scheme. It involves the interaction of the corporate and divisional levels on a structured basis, and, in a more informal manner, division and SBU cooperation. Corporate objectives to initiate the planning cycle are becoming more clearly directed and structured as planning evolves, while the use of a standardized format for divisional inputs for the 1977 planning cycle will develop more identifiable divisional objectives. Functional/area inputs and group level contributions are not specifically identifiable but are incorporated in divisional and corporate planning processes.

Cycle 2 of the planning process is a combined programs and budget

cycle; neither is independent of the other. While required by different sources, the bulk of both programs and budgets are done at the same levels within the organization at the same time. The initial corporate role, in terms of both the planner and the controller, is one of process starter. To varying degrees, group vice presidents give general guidelines to division managers. The division and SBU levels interact in developing the ADL Strategy Center Profiles, while functional/area input is as required for specialty information.

As a total system, general emphasis in terms of time spent and concern registered is with the right hand side of the 3x2 planning chart. Cycle 2 appears to be built on to the budgeting process which has historical precedent. The compression and emphasis upon the planning and budgeting of the second cycle implies an integrative weighting. Adaptive capabilities may, however, be latent and undeveloped in terms of the qualitative ability of the ADL profile format. Realization of these capabilities hinges upon the degree of budget dominance in Cycle 2.

A structural strength of the Nashua approach is the forced participation of the SBU level in the planning process through use of the strategy center concept. The inclusion of this level on a definitive basis is an integrative strength in the present emphasis is on budgeting rather than program requirements. The corporate presence is felt most strongly at the June and December meetings and at the quarterly operations reviews, again indicating on integrative orientation. While the adaptive

capability of the divisional level in Cycle 1 is becoming established over time, the role of the division during Cycle 2 planning is difficult to assess due to its nonstructured nature.

The flow of planning, ignoring the Cycle 2 compression, outwardly conforms to the Lorange/Vancil shape. A major consideration should be the actual roles assumed by corporate and divisional levels during the downward or left hand side of Cycle 2. A paper passing, processing type role leads to a degradation of adaptive power and, in reality, a "bottom-up" methodology.

A subjective analysis of capability assessment in terms of structural emphasis, levels, and shape of the planning flow chart yields the results shown in Figures 15 and 16. Overall, the structure appears more suitable for integrative than adaptive needs, primarily on the basis of Cycle 2 emphasis. Historically, post-1975 planning capability has increased over the previous system in terms of both adaptive and integrative characteristics. The potential of adaptive capabilities is dampened somewhat in the present sense by structural features outlined in this section.

Design

The most critical design characteristic to be examined in the Nashua system is the linkage established among phases. The content of the output from the long range cycle has limited influence on input into the planning and budget cycles within Cycle 2. This leads to an undue emphasis on the budgetary considerations of the second cycle through a

Figure 15

	Integration Capability of System		
	Strong	Medium	Weak
general emphasis on the "right hand side vs. the left hand side" of the "3 x 3" chart	X		
appropriate stages/levels of integration		X	
appropriate shape of flow chart for integration	X		

Figure 16

	Adaptive Capability of System		
	Strong	Medium	Weak
general emphasis on the "left hand side vs. the right hand side" of the "3 x 3" chart			X
appropriate levels/stages for adaptation		X	
appropriate shape of flow chart for adaptation	X		

lack of initial strategic considerations. The very tight linkage of the programming and budgeting processes again emphasizes integrative capabilities.

The corporate planner's role throughout is as a neutral facilitator concerned with procedural issues and quality of content. The corporate controller's role is a more formal one and imposes more severe constraints on both format and content of inputs. The corporate staff, to include the group level vice presidents and functions, has a time spent emphasis on review of outputs rather than development of inputs. The primary role of the division level is as a participant in Cycle 1, and as a reviewer of subordinate plans and budgets in Cycle 2. SBU managers utilize the descriptive portion of the ADL profile as a means of justifying budget levels. Overall, the roles of the players in the planning process tend to be result-seeking and most cognitive of internal requirements. The adaptive function is derived mainly from the corporate planning office and external, market considerations identified in the SBU profiles.

Corporate objectives are developed mainly through the interaction of the Chairman of the Board, VP of Corporate Development, and the Corporate Planner's office. Objectives are growth conscious but reflect a post-crisis desire on Nashua's part to operate with fiscal caution. Functional inputs in terms of financial data and projections industry trends, and international considerations are solicited from appropriate sources. The CEO reviews corporate objectives for content and direction. The concept of this type of written, communicated corporate objectives

is new and not fully developed. It therefore represents a significant departure from normal operating procedures; the effect on adaptation and integration capabilities, while presumed positive, will be more easily measured as the concept becomes more accepted and structured.

Programs or strategic projects are most likely to be generated in the Cycle 2 interplay between division and SBU. The ADL strategy center profile provides a format for the introduction of strategric projects on a yearly basis; generation of programs would likely be based upon perceived market needs and a feasible competitive environment. A factor in the development of new projects is the charge to divisions for use of the R&D function. New programs are funded by the sponsoring division. To some degree, this methodology tends to narrow or eliminate the span of options considered since costs are biased towards short term performance.

Environmental scanning has basically been performed at the SBU level as a part of the ADL profile market analysis requirements during Cycle 2. The divisional level environmental scanning during the second cycle is less identifiable and is more likely to be aggragated SBU information. The structured, qualitative portion of the divisional report required during Cycle 1 should provide a more specific divisional awareness of adaptive requirements as that requirement becomes developed in the 1977 planning cycle and beyond. The structuring of corporate objectives, also in the evolving stage, should lead to an enhanced adaptive capability at that level.

The chief tracking device used to monitor projections versus performance is the quarterly operations review meeting at which division performance is analyzed. The nature of these reviews is basically in terms of financial comparison of performance to date and previous projections. Integrative control or steering is the primary result. Programs in the start-up phase are examined as to performance on a cost-benefit scale. Corporate objectives are tracked on a quantative and qualitative basis in examining results of the past year for preparation of the annual report. This is basically a near-term comparison and does not fully provide quality control for more strategic objectives.

In summary, an assessment of planning capabilities as a function of design features yields as a result a system with emphasis upon internal control and integrative ability. The leading factors in this qualitative type evaluation are: (1) weak linkage between objective setting and programming; (2) a passive rather than active role by some cycle participants in giving direction through objectives and alternatives; and 3) an emphasis on short-term tracking of performance versus the quality control of strategic objectives. Factors which enhance adaptive capabilities but which do not appear to overcome the inherent integrative atmosphere are: 1) the ADL format which provides a framework for environmental scanning at the SBU level; and, 2) the present development of Cycle 1 in terms of establishing for the first time pointed corporate objectives and a structured divisional

strategy analysis. Finally, in terms of design issues, it must be continually emphasized that planning at Nashua is in a stage of deliberate evolution where gradual changes in design and corporate awareness of the process are taking place.

Other

At present, no computer-based models or management information systems are used directly by the Nashua Corporation in the planning process. The corporate planning office has a good working knowledge of the ADL approach for managing diverse planning. The corporate planner has in-depth experience with at least one other in-place, advanced planning system. A very limited amount of outside consulting help was utilized in implementing the ADL system. Basically, Nashua utilized internal resources in all but the initial sales presentation.

Management control is facilitated by profit centers established in the ADL strategy center approach. Divisions and Groups have aggregated profit and loss responsibilities. Nashua utilizes a comprehensive budgeting scheme at both the divisional and SBU levels. Action plans accompany projected cash-flow budgets and pro-forma financial statements. Major capital appropriation requests are submitted on a standard form which requires cost-benefit analysis in terms of net present value. There is no corporate hurdle rate for investment projects. Expenditures for approved programs reference the specific budget approval and the necessity of the purchase in light of the program. Emergency or special allocations are possible through application to corporate staff on an individual project/need basis. Overall, there is a close relationship among the planning function, management control, and capital budgeting. The planning function provides format and procedual aid in determining the dis-

tribution of funds for the next operating year.

Managerial compensation is largely fixed. The variable portion of the monetary incentive is based upon the performance of the company as a whole. At present, management salary is composed of salary based upon position and tenure, and an annual bonus based upon fulfillment of short-term budget performance. This mixture tends to encourage integrative control through emphasis on operational measures.

Summary

The conclusion drawn in weighing the results of the previous three sections is that the capabilities of Nashua's planning system are biased towards performing integrative management control functions. In instances where adaptive type information is elicited through structure, design, or format means, the present use of the data appears to be as a budgetary rather than a strategy tool. In short, the adaptive capabilities of the Nashua process are rated in the low-medium range while integrative abilities are high.

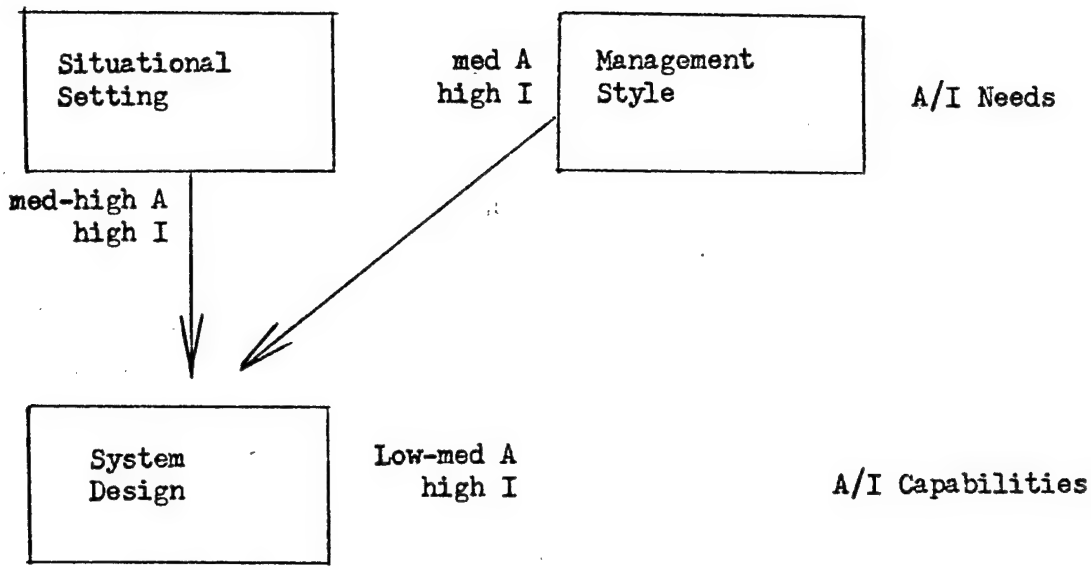
EVALUATION

The underlying objective of this paper has been to assess the needs of the organization in terms of situational setting and management style and to compare those findings with the capabilities stemming from the planning system being utilized. The common basis for measurement has been the use of adaptation and integration requirements. Figure 17 conveys the basic results of the analysis. Overall, a severe amount of mismatch does not exist. Integrative needs are high, but they are matched by a high integration capability. The present system's capabilities for adaptive planning appear to be inadequate given the situational setting and management style.

Internal effectiveness of the Nashua planning system is assumed to be a function of the needs/capabilities match/mismatch previously stated. It is worthwhile, in light of the findings, to assess in general terms what adaptive shortcomings exist. The following discussion is issue oriented and contains conceptual as well as specific references to Nashua's system.

One purpose of adaptive planning is to relate the status of the organization with its external environment. The environment is considerably larger for the corporation than it is for the division; similarly, divisional environments encompass a broader external activity range than SBU environments. Nashua's planning recognizes the need for SBU environmental analysis in terms of the ADL profile format during Cycle 2. An independent divisional analysis is in the start-up stage

Figure 17


Situational Setting
med A high I
Management Style
A/I Needs
med-high A high I
System Design
Low-med A high I
A/I Capabilities

during Cycle 1 procedures. Preparation at the corporate level for initiation of Cycle 1 should provide a dynamic evaluation of the corporate atmosphere. It is not clear that in setting the direction for the rest of the firm, the corporate objectives adequately assess or deal with the environment. Given that Cycle 1 seeks to forecast the future, planning must seek opportunities for growth and threats to present businesses. Action must be taken which will alter, accelerate, or reverse trends as appropriate. The corporate level must guard against subtle, gradual environmental changes which over time drastically alter previous assumptions and strategies. This is particularly important in view of the technological complexity of Nashua products and the rapidly changing nature of international operation. In short, the corporate level, in issuing objectives for Cycle 1, sets the tone for strategic thinking. If adaptive qualities at that point are not given adequate attention in preparation or dissemination, an initial integrative bias becomes established.

Once developed, corporate objectives are translated into corporate strategies. A significant portion of the adaptive/integrative mismatch occurs due to the Nashua distinction of long and short term strategies. The corporate strategy, once determined, appears to be communicated to lower levels in a nonstructured manner and more in an informational than narrowing down usage. Cycle 1 conceptually provides a sound basis for giving scope and direction to the planning cycle within Cycle 2, but lacks the structural connection to efficiently do so.

The lack of adaptive capability can further be traced to the co-existence of cycles within Cycle 2. It would seem plausible that this structure, while not by itself creating a system where adaptive thinking is not possible, presents a situation where strong directional guidance and adaptive encouragement is required in order to elicit adaptive thinking. Without such emphasis, the proximity of programming to budgeting creates an integrative bias.

Integrative emphasis in the face of adaptive need is furthered by SBU dominance of the second cycle. The SBU level requires a disproportionate amount of planning time in terms of focus of importance. The ADL format provides consistency in the evaluation of businesses and justifications of projected market share and volume. These worthwhile control features tend to dominate the format at the SBU level, providing more incentive for present/projected sales of current products than development of new products.

The imbalance of needs/capabilities developed here in general terms must be evaluated in the light of the evolving state of planning at Nashua and in terms of the atmosphere for planning found within the organization. Without doubt, the planning process has significantly contributed to the short-term stability and control of the Nashua Corporation. This mode fulfills the need of a diverse corporation seeking to consolidate its position in a post-crisis situation. As the crisis becomes more in the far-term past, planning must provide adaptive, strategic, growth oriented thinking. Its effectiveness in these areas

is presently limited.

The attitude and perceptions of the participants in the planning process is a useful, although subjective measure of external validity of the needs/capabilities analysis. Certainly different levels of management dedication to planning exist; it is evident that all managers at Nashua are not yet enthusiastic supporters of the planning process. Because of the relative newness of the concept, familiarity is still being gained. There has been a tendency to view planning as a stream of requirements associated with the processes of budgeting and funds allocation. This tendency, however, is being countered by a growing awareness on the part of management personnel of benefits accrued to them through planning. The most important aspect of the system to divisional and SBU level managers is the market analysis of competitive position. Planning has also increased the interaction of line and staff managers at essentially all levels, but particularly among divisions and SBU's. A most important question centers about the willingness of corporate management to utilize the planning system as a decision-making process with the stature to direct corporate growth or prune unhealthy businesses. It appears that while the planning process may surface supportive evidence for either growth or liquidation, top management retains a decision making perogative.

Assessment of external effectiveness of planning as a function of managerial impressions conveys an "in-between" position. Planning is, as of yet, still becoming established, both in terms of form and

emphasis. Clearly, it is perceived as having some permanance. It most generally is viewed as an integrative or control tool, while the environmental scanning function is at least recognized at the division and SBU level. These observations correlate fairly well with the more objective analysis of the planning system's design and structure which yielded high integrative capabilities and low-medium adaptive ability.

RECOMMENDATIONS

Based upon the pattern of match/mismatch encountered in assessing the needs versus capabilities of the Nashua planning system, the following recommendations seem appropriate:

1) Assign more emphasis to the thorough development of corporate objective in light of internal/external considerations.

2) Increase CEO participation in preparation of corporate planning documents so as to emphasize the importance of planning as a corporate wide function.

3) Utilize a more formal methodology for both consolidating the results of the June planning meeting, and transferring those results as a starting point for Cycle 2 program development.

4) Better conceptualize the role of the division in the planning portion of Cycle 2. Insure that division level managers are providing adequate guidance in the downward direction, screening in the upward direction, and meaningful feedback/interaction throughout.

5) Provide emphasis to the need for developing programs which allow new growth through new products, new processes, or new markets. Recognize that the need

for such emphasis arises from the inherent integrative bias resulting from the structural compression of programs and budgets.

6) Attempt to utilize the planning system as a vehicle for corporate communication in order to reduce its "requirement" identification, establish its importance, and enhance continuity of cycles.

7) Investigate means to reward strategic thinking versus short term performance. Possibly initiate long-term track records of corporate managers in terms of planning performance. Seek methods to effectively track objectives.

8) Investigate the possibility of funding R&D for program/project development on a corporate rather than divisional level as a means of unlocking the risk-adverse nature of managers and stimulating creativity and growth.

These recommendations are made in light of the inherent strengths of the current process. The corporation is determined to have the system be simple and uncluttered in keeping with management style. Planning seeks to manage its evolution through an ongoing process of integrating its elements with those of the existing organization. Certainly costs involved in terms of management time and financial investment must be considered. The planning office, given the situ-

ational characteristics, should continue its key strategy of solidly implanting pieces of basic groundwork over a gradual period of planning acceptance. In this manner, the integrative abilities developed in the face of crisis can be maintained, while the adaptive capabilities, necessary to a degree in the present but becoming essential as Nashua seeks to expand, can be developed more fully.

SUMMARY

This analysis is based upon the data collected by an observer with limited time. While hopefully impartial, the information is to whatever degree, lacking the more in-depth, informal insight acquirable only through participation or possibly more extended observation. The trade-off between impartiality and insight must be recognized in attempting to gain value from this type of research effort.

Finally, the framework of this paper implicitly assumes the relevance and validity of conceptual schemes which are relatively new and unproven (or unprovable). Just as strategic planning and the corporate planning process are developing, so too are the methodologies available to analyze and better design them. The structured project, of which this paper is a part, is an incremental attempt to improve that analytical capability.